

MULTILAYER ARCHITECTURE FOR MICROCONTACT PRINTING STAMPS

ABSTRACT

A layered structure and process for a microcontact printing stamp has individual layers chosen to impart particular properties such as one layer chosen for surface properties and another layer chosen for bulk mechanical properties. The invention is fabricated through having a first layer with coatable properties and a subsequent layer with injectable properties resulting in a layered structure wherein the layer at the surface has optimized surface properties and is positioned on an underlying layer with carefully chosen bulk mechanical properties, and other unique functional properties can be imparted through an intermediate layer. A fabrication process is provided that employs a coating capability for one portion, an injection capability for another property and a porosity property for still another portion.